Technology Requirements for Online Testing

IETA Conference

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Topics

- Site Readiness
- Network Requirements
- Hardware and Software Requirements
- Secure Browser Installation
- Network Diagnostics and Configuration

Objectives

By the end of this presentation, you should be able to:

- Understand your role and responsibilities
- Prepare for online tests at your school
- Install the secure browser
- Troubleshoot technical problems during the tests

Technology Coordinator Tasks

- Logins and passwords
- Minimum system requirements
- Secure browser
- Determining system readiness and network capacity
- Troubleshooting technical issues

Network Requirements

Network Configuration:

- Session timeouts on proxy servers and other devices should be set to values greater than the typically scheduled testing time. For example, if test sessions are scheduled for 60 minutes, consider session timeouts of 65–70 minutes.

- Web proxy servers must be configured to NOT cache data received from servers.

- For any device that performs traffic shaping, packet prioritization, or quality of service, the URLs to be used for testing should be given a high priority to ensure the best performance.

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Network Requirements

Whitelisting:

Content filters, firewalls, and proxy servers should be configured to allow the URLs for testing sites and applicable non-testing sites.

Network Requirements

System	URL to Whitelist	
Non-Testing Sites Portal and secure browser installation files Single Sign On System Test Information Distribution Engine Online Reporting System Teacher Hand-Scoring System		
TA and Student Testing Sites Assessment Viewing Application (if applicable)	*.airast.org *.tds.airast.org *.cloud1.tds.airast.org *.cloud2.tds.airast.org	
Online Dictionary and Thesaurus (if applicable)	**Domain:** media.merriam-webster.com www.dictionaryapi.com	**IP Address:** 64.124.231.250 64.124.231.250

Network Requirements

Pop-ups:

Configure Internet browsers on Test Administrator devices to allow pop-ups from your testing websites.

Network Requirements

Performance Factors:

- Network bandwidth

- Number of students simultaneously testing

- Wireless networking configuration

- Secure browser

Network Performance

Bandwidth:

- At least 20 Kbps bandwidth per student being tested

- Affected by both Local Area Network (LAN) traffic and Internet traffic from the router

- LAN should always be analyzed to determine potential traffic bottlenecks

Network Diagnostics Tool

Number of students simultaneously testing:

- Network performance may slow when large numbers of students are testing at one time.

- Multiply the number of students being tested by 20 Kbps to get an estimate of bandwidth needed, and compare that estimate with the network speed test.

- Perform network analyses at different times to ensure adequate capacity.

Diagnostic Screen

This page allows you to check the **current** bandwidth of your network. Select a test from the drop-down list and enter the maximum number of students likely to test at one time, then click [Run Network Diagnostics Tests].

Your Operating System: **Windows 7**

Your Browser Version: **Firefox v38**

Secure Browser: **false**

Network Diagnostics:

Select Test: Select Test ▼

Enter the total number of students you would like to test at one time:

Run Network Diagnostics Tests

Return to Login   TTS Check

Network Performance

Wireless Network Configuration:

Wireless traffic must use encryption.

- Wi-Fi Protected Access II (WPA2)
- Advanced Encryption Standard (AES)

Wireless access points have limits on total bandwidth and number of simultaneous devices in use.

System Requirements

- Desktops and Laptops

- Monitor Display

- Mobile Devices

- Secure Browser

System Requirements: Desktops and Laptops

Supported Operating Systems	Minimum Requirements	Recommended Specifications
Windows Vista, 7, 8.0 (Professional), 8.1, 10 (Educational and Professional) Server 2008, 2012 (thin client)	Pentium 4 or newer processor that supports SSE2 512 MB of RAM 200 MB hard drive space	Pentium 4 or newer processor that supports SSE2 2 GB+ RAM 80 GB+ hard drive
Mac OS X (Intel) 10.7–10.11	Intel x86 processor 512 MB of RAM 200 MB hard drive space	Pentium 4 or newer processor 2+ GB RAM 80+ GB hard drive
Linux Fedora 23 & 24 openSUSE 13.1, 13.2 Red Hat Enterprise Linux 6.5 Ubuntu (LTS) 12.04, 14.04, 16.04	Intel x86 processor 512 MB of RAM 200 MB hard drive space Required libraries/packages: GTK+ 2.18 or higher GLib 2.22 or higher Pango 1.14 or higher X.Org 1.0 or higher (1.7+ recommended) libstdc++ 4.3 or higher libreadline6:i386 (required for Ubuntu only) GNOME 2.16 or higher	Pentium 4 or newer processor 2 GB RAM 80 GB hard drive Recommended libraries/packages: In addition to the required libraries listed under minimum requirements, the following should be installed: NetworkManager 0.7 or higher DBus 1.0 or higher HAL 0.5.8 or higher

Note: AIR will support OS X 10.12 and Fedora 25 when they become available.

System Requirements

Appropriate Monitor Display

- Monitor settings may need to be adjusted if test items with shaded images are very light or cannot be seen.

- The larger the monitor, the more "real estate" students have.

- Minimum Resolution for desktops, laptops, and tablets: 1024 x 768 or better

- Minimum Resolution for netbooks: 1024 x 600 or better

System Requirements: Supported Mobile Devices

Operating System	Supported Tablets	Browsers for TA Sites	Browsers for Student Sites
Android 4.4 5.0, 5.1 6.0[a]	Google Nexus 10 Motorola Xoom Samsung Galaxy Note (2014 edition) Samsung Galaxy Tab 3 and 4 LearnPad Quarto	Chrome 51+	AIR Mobile secure browser
Chrome OS 51+[a]	Chromebook	Chrome 51+	AIRSecureTest kiosk application
iOS (iPads) 8.0–8.2 9.2, 9.3 10.0[a]	iPad 3 Fourth-generation (Retina Display) iPad Air iPad Air 2	Safari 7 Safari 8 Safari 9 Safari 10	AIRSecureTest Mobile Secure Browser
Windows 8.0 (Professional) 8.1 10 (Educational and Professional)	AIR supports any tablet running these versions of Windows, but has done extensive testing only on Surface Pro, Surface Pro 3, Asus Transformer, and Dell Venue.	Chrome 51+ Firefox 45+ Internet Explorer 11, Edge	

[a]Support for this version depends on its availability at the start of the school year.
[b]Support for these versions ends when version 10.0 becomes available.

Secure Browser

- The secure browser prevents students from accessing other computer or Internet applications and copying test information during testing.

- Practice and training tests can be accessed with either the secure browser or with Chrome, Firefox, Safari, Internet Explorer 11, or most native tablet web browsers.

Secure Browser

- The Student Testing Site requires the use of a secure browser.

- The correct secure browser for each operating system must be downloaded and installed on all computers that will be used for student testing.

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System Requirements: Secure Browser	
Computer/Device	**Secure Browser Location**
Windows, Mac, and Linux computers	http://idaho.portal.airast.org/supported-browsers/
Android tablets	Play Store
iPad tablets	App Store
Chromebooks	Chrome Web Store

Secure Browser Installation

Important Information

Windows
Vista, 7, 8.0, 8.1, 10, 11; Server 2008, 2012

Mac OS X
10.6–10.12

Linux
Fedora 22–25
openSUSE 13.1, 13.2
Red Hat Enterprise 6.5
Ubuntu (LTS) 12.04, 14.04, 16.04

iOS
7.0, 7.1 8.0–8.2, 9.x, 10.x

Android
4.4–6.0

Chrome OS
48+

Technical Resources

- For information about supported operating systems and web browsers, refer to *System Requirements for Online Testing.*

- For information about securing a computer before a test session, see the *Test Administrator User Guide.*

- For information about network and Internet requirements, general peripheral and software requirements, and configuring text-to-speech settings, see the *Technical Specifications Manual for Online Testing.*

- For information about supported hardware and software for Braille testing as well as information about configuring JAWS refer to the *Braille Requirements and Testing Manual.*

- For information about installing secure browsers, refer to the *Secure Browser Installation Manual.*

About Supported Operating Systems

The operating system versions listed in the above table are the only ones officially supported.

Warning: Support for New Desktop Operating Systems

Desktop operating systems, in particular new versions of those operating systems, not in the above table are not supported. Do not upgrade to new operating systems on computers used to administer online assessments.

Warning: Support for Updated Mobile Operating Systems

Turn off or delay automatic updates of operating systems for mobile devices. AIR reviews these updates to verify they do not pose a risk to student testing, and will post announcements on this portal accordingly.

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Secure Browser Installation

Installation Methods:

- Download the secure browser from your portal and install it.

- Download and save the secure browser onto a media device (such as a flash drive), and copy and install the files on each computer.

- Download and save the secure browser to a network folder, and copy and install the files on each computer.

Secure Browser Installation
Windows

MSI file type enables deployment using a number of tools:

- Active Directory Group Policy

- Microsoft SMS

- Microsoft SCCM

- Microsoft WSUS

- Windows NT Batch

Secure Browser Installation
Mac and Linux

Mac

DMG file type enables deployment using Apple Remote Desktop.

- Munki
- Filewave

Linux

TAR file type enables deployment using a number of tools including the following:

- Shell scripts
- Puppet

Secure Browser Installation
Disabling OS X Features

- Disable Exposé or Spaces
- Disable application launches from function keys
- Disable updates to third party apps
- Disable updates to iTunes

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Text-to-Speech

- Voice technology must be available and functioning for students who require this accommodation.

- For Windows and Mac operating systems, default voice packs are generally pre-installed.

- A customized voice pack may be available for Windows computers under **Resources** in the TIDE banner.

- Linux users will find a voice pack included with the Linux secure browser installation file.

Text-to-Speech on Mobile Devices

- iPad users can adjust volume, pitch, and speaking rate.

- Chromebook users can adjust volume and speaking rate.

- These settings are also adjustable in the test.

- Currently, these features are not available on Android devices.

Text-to-Speech Sound Check
Make sure text-to-speech is working.

Press the speaker button. You should hear a voice speak the following sentence: "This text is being read aloud."

Next Step:

If you heard the voice clearly, choose **I heard the voice**. If not, choose **I did not hear the voice**. To continue testing without checking text-to-speech, choose **Skip TTS Check**.
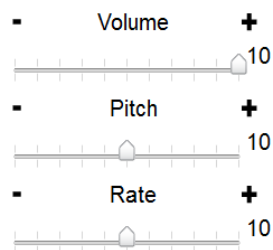
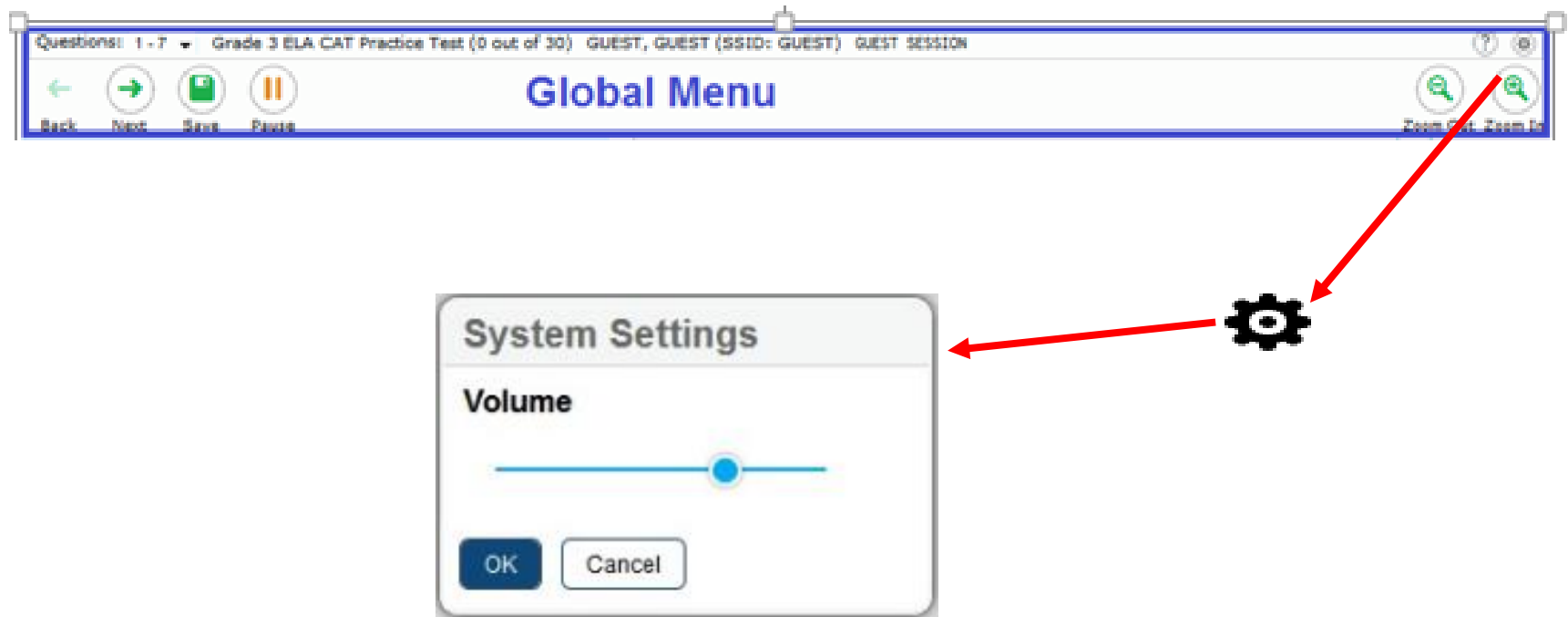| I heard the voice	I did not hear the voice	Skip TTS Check

Sound Settings
Current Voice Pack: MS-Anna ▾

Use the sliders to adjust the available text-to-speech settings.

- Volume +
10

- Pitch +
10

- Rate +
10

Sound Settings Inside Student Tests

Thank You!

Further Information

- Visit:

  - http://idaho.portal.airast.org/

- Call, or email the Idaho Help Desk

  - Hours: 8:00 am to 8:00 pm Mountain Time, Monday-Friday (except holidays)

  - Phone: 1-844-560-7365

  - Fax: 1-877-218-7663

  - Email: IDHelpDesk@air.org